

## Annual Peak-Flow Frequency Analysis

For more information on the contents of this documentation, see Kessler and others (2013).

### Streamgauge number and name:

05131750 Big Fork River near Bigfork, Minn.

### Peak-flow information:

Number of systematic peak flows in record	39
Systematic period begins	1973
Systematic period ends	2011
Length of systematic record	39
Years without information	0
Number of historical peak flows in record	0

### Frequency analysis options:

Method	Expected moments algorithm (EMA)
Skew option	Weighted
Generalized skew	-0.21
Standard error of generalized skew	0.4266
Low-outlier method	Single Grubbs-Beck test

### EMA systematic record analysis results:

#### Moments of the common logarithms of the peak flows:

	Standard	
Mean	deviation	Skewness
3.0848	0.2049	-0.781

#### Low-outlier information:

Number of low outliers	0
Low-outlier threshold	500

**Final analysis results:**

**Moments of the common logarithms of the peak flows:**

	Standard	
Mean	deviation	Skewness
3.0853	0.2030	-0.475

**Annual frequency curve at selected exceedance probabilities:**

[WIE, Weighted independent estimate; --, not computed]

Exceedance probability	Peak estimate	Lower-95 level	Upper 95 level	WIE estimate	Lower-95 WIE level	Upper 95 WIE level
0.9950	297	97.6	429	--	--	--
0.9900	350	136.0	484	--	--	--
0.9500	532	316.0	672	--	--	--
0.9000	656	453.0	801	--	--	--
0.8000	833	648.0	990	--	--	--
0.6667	1,030	847.0	1,200	--	--	--
0.5000	1,260	1,070.0	1,470	1,270	1,090	1,470
0.4292	1,370	1,170.0	1,590	--	--	--
0.2000	1,820	1,570.0	2,140	1,820	1,580	2,110
0.1000	2,150	1,850.0	2,620	2,170	1,850	2,550
0.0400	2,540	2,160.0	3,310	2,580	2,130	3,130
0.0200	2,810	2,340.0	3,860	2,870	2,300	3,580
0.0100	3,060	2,480.0	4,440	3,150	2,440	4,060
0.0050	3,300	2,600.0	5,070	--	--	--
0.0020	3,590	2,720.0	5,960	3,760	2,680	5,280

**Peak-flow data used in the analysis:**

Explanation of symbols and codes

< Less than

-- none

Water	Peak	Peak-flow	Water	Peak	Peak-flow
year	flow	code	year	flow	code
1973	900	--	1993	995	--
1974	1,800	--	1994	985	--
1975	2,030	--	1995	1,210	--
1976	1,340	--	1996	1,750	--
1977	550	--	1997	1,490	--
1978	1,420	--	1998	825	--
1979	2,830	--	1999	1,870	--
1980	1,140	--	2000	680	--
1981	520	--	2001	2,100	--
1982	1,810	--	Gap in systematic record		
1983	1,500	--	2003	<451	--
1984	1,580	--	2004	678	--
1985	2,010	--	2005	1,500	--
1986	1,950	--	2006	1,190	--
1987	1,420	--	2007	500	--
1988	1,000	--	2008	1,400	--
1989	1,430	--	2009	1,640	--
1990	930	--	2010	1,090	--
1991	896	--	2011	2,060	--
1992	872	--			